

Appl. No. 09/719,709
Amdt. Dated May 21, 2004
Reply to Office action of March 23, 2004
Attorney Docket No. P09410-US1
EUS/J/P/04-3119

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method of transmitting and receiving an image, comprising,

when transmitting the image:

performing a forward transformation on the image to be transmitted;

defining the required regions of interest in the image;

creating a mask describing transform coefficients for reconstructing each region of interest;

utilizing the mask to classify the transform coefficients into segments;

coding each segment independently;

concatenating the bit stream of each segment together with necessary stream and header information; and

sending the concatenated bit stream to the receiver; and

when receiving the image:

receiving the concatenated bit stream and decoding the header information;

locating and decoding the segment information associated with the regions of interest in the concatenated bit stream;

creating a mask describing which coefficients are needed for reconstructing the segments of each region of interest;

decoding the needed segment data from the concatenated bit stream; and

reconstructing the needed segments for displaying the reconstructed segments.

2. (Previously Presented) The method of claim 1, wherein prior to transmitting the image, different image regions are coded to have predetermined accuracy levels independent of each other.

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3. (Canceled)

4. (Previously Presented) The method of claim 1, wherein when receiving the image, only predetermined parts of the bit stream are decoded.

5. (Previously Presented) The method of claim 1, further comprising generating a topology description, prior to transmitting the image, defining the topological relationship between objects and shapes in the image.

6. (Previously Presented) The method of claim 1, further comprising generating a shape description, prior to transmitting the image, for determining the closed boundary line of an object in the image.

7. (Previously Presented) The method of claim 1, further comprising generating a segment description prior to transmitting the image, determining the transform coefficients that belong to a respective segment.

8. (Previously Presented) The method of claim 7, further comprising generating a subset description, prior to transmitting the image, determining the transform coefficients that belong to an independently decodable part of a segment.

9. (Previously Presented) The method of claim 8, further comprising generating a pointer, prior to transmitting the image, for defining a position in the bit stream of a descriptor associated with an object in the image.

10. (Previously Presented) An arrangement for transmitting an image, comprising:

- a transmitter and a receiver, wherein the transmitter comprises;

means for performing a forward transformation on the image to be transmitted;

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means for defining the required regions of interest in the image;

means for creating a mask describing transform coefficients for reconstructing each region of interest;

classification means for utilizing the mask to classify the transform coefficients into segments;

a coding device for coding each segment independently and to provide the number of bits for each segment;

concatenating means for concatenating the bit stream of each segment together with necessary stream and header information; and

means for sending the concatenated bit stream to the receiver; and wherein the receiver comprises:

receiver means for receiving the concatenated bit stream and decoding the header information;

means for locating and decoding the segment information associated with the regions of interest in the bit stream;

means for creating a mask describing which coefficients are needed for reconstructing the segments of each region of interest;

a decoder for decoding the needed segment data from the bit stream; and reconstructing the needed segments for displaying the reconstructed segments.

11. (Previously Presented) The arrangement of claim 10, wherein the coding device is arranged to encode different image regions to have predetermined accuracy levels independent of each other.

12. (Canceled)

13. (Previously Presented) The arrangement of claim 10, wherein the decoder is arranged to decode only predetermined parts of the compressed bit stream.

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14. (Previously Presented) The arrangement of claim 10 wherein the transmitter has means for generating a topology description, defining the topological relationship between objects and shapes in the image.

15. (Previously Presented) The arrangement of claim 10 wherein the transmitter has means for generating a shape description, defining the closed boundary line of an object in the image.

16. (Previously Presented) The arrangement of claim 10, wherein the transmitter has means for generating a segment description, determining which transform coefficients belong to a respective segment.

17. (Previously Presented) The arrangement of claim 16, wherein the transmitter has means for generating a subset description, determining which transform coefficients belong to an independently decodable part of a segment.

18. (Previously Presented) The arrangement of claim 17, wherein the transmitter has means for generating a pointer, that identifies a position in the bit stream for the respective one of the above mentioned descriptions.